

**AMENDMENTS TO THE CLAIMS**

Please amend the claims as follows.

1. (Currently Amended) A power controller for use with lighting systems including:
  - a direct current voltage source,
  - a coil of known inductance,
  - a switch means adapted to control application of the source voltage to the coil,
  - means adapted to select a required duty cycle for the switch such that the input power level is substantially constant, and
  - means adapted to control operation of the switch such that this selected duty cycle is effected.
2. (Currently Amended) A power controller as in claim 1, further including means to rectify an output of the coil.
3. (Original) A power controller as in claim 1 further including at least one diode and at least one capacitor, arranged to co-operate with the switch and the coil to form a switchmode DC-DC converter.
4. (Original) A power supply as in claim 3 wherein the switchmode power supply is a but-boost converter.
5. (Original) A power supply as in claim 3 wherein the switchmode power supply is a buck converter.
6. (Original) A power supply as in claim 3 wherein the switchmode power supply is a boost converter.
7. (Original) A power controller as in claim 1 wherein the coil is a primary coil of a transformer, further including a secondary coil, the switch means being adapted to control application of the source voltage to the primary coil of said transformer.

8. (Original) A power controller as in claim 7 further including at least one diode and at least one capacitor, arranged to co-operate with the switch and the transformer to form a switchmode DC-DC converter.
9. (Original) A power supply as in claim 8 wherein the switchmode power supply is a flyback converter.
10. (Currently Amended) A power controller as in ~~any one of the preceding claims~~ claim 1, wherein the power controller is coupled to an electric-to-light output transducer.
11. (Original) A power controller as in claim 10 wherein the transducer is an arc lamp.
12. (Original) A power controller as in claim 10 wherein the transducer is one or more light emitting diodes.
13. (Currently Amended) A power controller as in ~~any one of the preceding claims~~ claim 1, wherein the means adapted to select the required duty cycle includes means to sense the magnitude of a voltage being provided by the voltage source.
14. (Currently Amended) A power controller as in ~~any one of the preceding claims~~ claim 1, wherein the means adapted to select the duty cycle of the switch calculates this duty cycle according to a fixed mathematical relationship between said duty cycle and the voltage provided by the voltage source, the inductance of the coil and a desired power throughput of the device.
15. (Currently Amended) A power controller as in ~~any one of the preceding claims~~ claim 1, wherein the means adapted to determine the duty cycle of the switch includes a microprocessor.
16. (Original) A power controller as in claim 15 wherein the means to calculate the duty cycle of the switch includes stored instructions which the microprocessor is adapted to follow.
17. (Currently Amended) A power controller as in ~~any one of claims~~ claim 15, ~~or 16~~ wherein the means to sense the magnitude of a voltage being provided by the voltage source is an input to the microprocessor.

18. (Currently Amended) A power controller as in ~~any one of the preceding claims~~ claim 1, wherein the voltage source is a battery.
19. (Currently Amended) A method of effecting a supply of electrical power to an electrical-to-light output transducer, comprising:
- ~~where the~~ directing an input from a direct current supply ~~is directed~~ to a means ~~which will~~ for effecting transition into an output, wherein said means ~~further~~ includes means to effect frequent switching,
- wherein ~~[[the]]~~ a mark-space ratio of the switching is ~~able to be modified~~ modifiable such that the input power is held ~~effectively~~ substantially constant.
20. (Cancelled).
21. (Cancelled).
22. (New) A power controller as in claim 16, wherein the means to sense the magnitude of a voltage being provided by the voltage source is an input to the microprocessor.